

## HISTORY OF SCIENCE I

### 1st TERM

<u>Lecture I</u> (M.L.R.)	Aristotelian Physics (Selected passages from Aristotle: Physica, De Caelo and De Generatione et Corruptione)
<u>Lecture II</u> (M.P.E.)	Greek biology: observation and classification of living forms. Aristotle ; Theophrastus; Dioscorides.
<u>Lecture III</u> (M.L.R.)	Aristotelian Physics Cont.
<u>Lecture IV</u> (M.P.E.)	Animal Physics, generation, medical physiology. Aristotle, Hippocratic School, Erasistratus, Herophilus, Galen.
<u>Lecture V</u> (M.L.R.)	The development of Astronomy to 1500 AD. Aristarchus, Eratosthenes, Hipparchus, Ptolemy, Arabic Astronomy.
<u>Lecture VI</u> (M.P.E.)	Greco-Arabic science and its reception in the Christian West. The development of Alchemy.
<u>Lecture VII</u> (M.L.R.)	The development of Mechanics to 1500 AD - Archimedes, Buridan, Oresme.
<u>Lecture VIII</u> (M.P.E.)	Alchemy in Europe.
<u>Lecture IX</u> (M.L.R.)	Copernicus.
<u>Lecture X</u> (M.P.E.)	Anatomy and Physiology in the 16th C.
<u>Lecture XI</u> (M.L.R.)	Kepler.

Vacation Reading: Harvey: de Motu Cordis, Selected passages from  
Galileo: The Sidereal Messenger, The Assayer,  
The Dialogo and the Discorsi.

2nd TERM

Lecture I  
(M.L.R.)

Galileo - Contribution to Astronomy.

Lecture II  
(M.P.E.)

William Harvey and the discovery of the circulation of the blood: the reception of Harvey's discoveries: Mechanism and Vitalism.

Lecture III  
(M.L.R.)

Galileo - Contribution to Mechanics.

Lecture IV  
(M.P.E.)

Harvey and others on Generation: Embryology; Preformation and Epigenesis.

Lecture V  
(M.L.R.)

Gilbert - Early theories of Magnetism.

Lecture VI  
(M.P.E.)

The Classical Microscopists: biogenesis and abiogenesis.

Lecture VII  
(M.L.R.)

Descartes - The mechanical world view.

Lecture VIII  
(M.P.E.)

Herbals, Encyclopaedic Naturalists, the problem of taxonomy.

Lecture IX  
(M.L.R.)

Bacon and the experimental method.

Lecture X  
(M.P.E.)

Mining and chemical technology. Biringuccio; Agricola.

Lecture XI  
(M.L.R.)

Huyghens, Leibniz and Hooke. The development of mechanics prior to Newton.

Vacation Reading: Selected passages from Newton: Principia and opticks.

3rd Term

Lecture I  
(M.L.R.)

Newton and Gravitation

Lecture II  
(M.P.E.)

Scientific Societies in the 17th C.

Lecture III  
(M.L.R.)

Newton on Mechanics

Lecture IV  
(M.L.R.)

Newton's work on Optics.

## HISTORY OF SCIENCE II

### 1st TERM

D.A.G.

7 lectures on the discovery of non-Euclidean geometry and the arithmetization of analysis in the history of 19th c. mathematics.

followed by

H.R.P

3 lectures on 17th, 18th and 19th century chemistry.

### 2nd TERM

H.R.P.

1 lecture on 19th century chemistry

followed by

M.L.R.

6 lectures on 19th century physics: the development of the kinetic theory of gases, the laws of thermodynamics and the concept of the electromagnetic field.

followed by

M.P.E.

4 lectures on 19th century biology: cell theory and theories of evolution.

### 3rd TERM

Project in history of science. An extended essay on a selected topic in the history of physics, chemistry, mathematics or biology.

Total Number of Lectures for History of Science I and II

M.P. Earles	15 lectures	Biology
H.R. Post	4 lectures	Chemistry
D.A. Gillies	7 lectures	Mathematics
M.L.G. Redhead	<u>21 lectures</u>	Physics
<u>TOTAL</u>	<u>47 lectures</u>	